

What is claimed is:

1. An archery bow comprising:
a riser extending between opposing first and second ends;
a limb coupled to each end of said riser;
an axle pivotally connecting at least one of said limbs to one end of said riser;
and
an actuator operatively coupled between at least one of said limbs and said riser adjacent said axle for supporting said limb about said riser, said actuator including a resilient member for storing and releasing energy as said limbs are flexed about said riser.
2. An archery bow as set forth in claim 1 wherein said resilient member compresses and stores energy as said limbs are flexed from a braced position to a drawn position and elongates and releases said stored energy as said limbs return from said drawn position to said braced position.
3. An archery bow as set forth in claim 1 wherein said resilient member elongates and stores energy as said limbs are flexed from a braced position to a drawn position and compresses and releases said stored energy as said limbs return from said drawn position to said braced position.
4. An archery bow as set forth in claim 1 wherein said actuator further includes a first connector attached to said resilient member and pivotally coupled to said riser, and a second connector attached to said resilient member and pivotally coupled to said limb.
5. An archery bow as set forth in claim 4 wherein said riser includes a pair of spaced apart riser flanges having axially aligned holes for rotatably supporting said first connector.

6. An archery bow as set forth in claim 5 wherein said limb comprises a limb pocket and an extending arm, said limb pocket having a base for fixedly supporting said extending arm and an axle post for receiving said axle and pivotally attaching said limb to said riser.

7. An archery bow as set forth in claim 6 wherein said limb pocket includes a pair of spaced apart support posts extending from said base each having an axially aligned holes therethrough for rotatably supporting said second connector.

8. An archery bow as set forth in claim 7 wherein at least one of said connectors includes a pivot post having an axial bore therethrough, said pivot post seating between one of said riser flanges of said riser and said support posts of said limb such that said axial bore and said axially aligned holes are aligned.

9. An archery bow as set forth in claim 8 further including an axle extending through said axially aligned holes and said axial bore to secure said at least one of said connectors and said one of said riser and said limb such that as said pivot post rotates about said retaining pin, said actuator rotates about said one of said riser and said limb.

10. An archery bow as set forth in claim 9 wherein one of said first and second connectors includes a connector pin extending through said resilient member and seated within the other of said first and second connectors to secure said first and second connectors to said resilient member.

11. An archery bow as set forth in claim 7 wherein at least one of said connectors includes a longitudinally recessed threaded bore, said threaded bore seating between one of said riser flanges of said riser and said support posts of said limb.

12. An archery bow as set forth in claim 11 further including a retainer extending through said axially aligned holes of said one of said riser flanges of said riser and

said support posts of said limb for rotatably supporting said at least one of said connectors.

13. An archery bow as set forth in claim 12 further including a retainer axle extending through said retainer for allowing said retainer to rotate within said thereabout.

14. An archery bow as set forth in claim 13 wherein said retainer includes an longitudinal bore for receiving said at least one of said connectors such that as said retainer rotates about said retainer axle, said actuator rotates about said one of said riser and said limb.

15. An archery bow as set forth in claim 14 wherein said at least one of said connectors includes a longitudinally recessed threaded bore, said threaded bore extending through said aperture to align said at least one of said connectors and said support rod.

16. An archery bow as set forth in claim 15 further including a retainer pin extending longitudinally through said longitudinal bore and said threaded bore for securing said at least one of said connectors to said retainer.

17. An archery bow as set forth in claim 1 wherein said resilient member absorbs excess energy as said limbs return to a braced position from a drawn position after a shot to minimize oscillation of said limbs and said riser.

18. An archery bow comprising:
a riser extending between opposing first and second ends;
a limb coupled to each end of said riser;
an axle pivotally connecting at least one of said limbs to one end of said riser;
and

an actuator operatively coupled between at least one of said limbs and said riser for supporting said limb about said riser, said actuator including a first connector pivotally coupled to said riser and a second connector pivotally coupled to said limb for maintaining the angular position of said actuator relative to said limb as said limb is flexed about said riser.

19 An archery bow as set forth in claim 18 wherein said actuator includes a resilient member extending between said first and second connector for storing and releasing energy as said limb is flexed about said riser.

20. An archery bow as set forth in claim 19 wherein said riser includes a recessed end profile for defining a pocket between said riser and said limb for receiving and allowing said actuator to articulate and maintain its angular position relative to said limb as said limb pivots about said riser.